

effects of herbal acupuncture of *Nidus Vespae* (NV) applied to different acupoints in cases of acute colitis induced by trinitrobenzenesulphonic acid (TNBS) in tricolonic injection in rats.

Methods: TNBS (5mg/kg) was infused intrarectally through a silicon rubber catheter into the anus under isoflurane anaesthesia in male Sprague-Dawley rats, weighing 250–400g. Under general anesthesia, the LI4 (Hapkok), SI25 (Cheonchu), ST36 (Joksamni) and BL25 (Daejangsu) acupoints were intramuscularly injected with NV. Expressions of c-Fos protein in the periaqueductal gray (PAG), locus coeruleus (LC), nucleus of the solitary tract (Sol), and the 6th lumbar spinal cord (L6) were observed 24 hours after TNBS-induced colitis by using immunohistochemistry.

Results: The expressions of c-Fos protein in L6, Sol, LC and PAG were increased 24 hours after TNBS injection into colorectum as compared to rats with no TNBS injection. NV herbal acupuncture inhibited the expression of c-Fos protein in Sol, but not in L6, LC or PAG. NV to ST36 significantly inhibited the c-Fos expression in Sol and PAG. NV to ST25 inhibited the c-Fos protein expression over the entire observation area. NV to BL25 showed inhibitory effects in all areas except LC. To determine the role of endogenous opioids, we applied intrathecal injection of naltrexone (30ug/30ul) before the second herbal acupuncture treatment, 24 hours after TNBS-induced colitis in rat. Naltrexone reversed the inhibition of c-Fos protein expression in the spinal cord and brain stem under different conditions, such as the type of herbal acupuncture compound used or the choice of acupoint.

Conclusions: In summary, these data show that herbal acupuncture with NV inhibits signal pathways, such as the spinal cord and the brain stem, thereby increasing the hypersensitivity of colorectum after TNBS-induced colitis. This effect may be mediated by using acupoints through the endogenous opioid system involving pain modulation.

Keywords: Herbal acupuncture, *Nidus Vespae*, Colitis, Rat, c-Fos

(6) Journal of Korean Pharmacopuncture Institute, Vol 12, No. 4, 5–32, 2009

Study of Single Dose Test of Sweet Bee Venom in Rats

Young-Jin Kim, Chung-San Lim, Ki-Rok Kwon

Abstract

Objectives: This study was performed to analyze the single-dose toxicity of pure melittin (Sweet Bee Venom-Sweet BV) extracted from bee venom by utilizing the protein isolation method of gel filtration.

Methods: All experiments were conducted at Biototech, an institution authorized to conduct non-clinical studies, under the regulations of Good Laboratory Practice. Six-week-old female Sprague-Dawley rats were chosen for the pilot study, and 30mg/kg (4285×higher than the clinical application dosage) was determined as the high dosage, followed by 15 and 7.5mg/kg as the mid and the low dosages, respectively. An amount of excipient equal to that administered to the Sweet BV groups was administered to the control group.

Results: (1) No mortality was witnessed in any of the experiment groups. (2) Hyperemia and movement disorder were observed around the area of administration in all groups, with a higher incidence being observed in the higher dosage groups. Hyperemia and movement disorder diminished with time. (3) For the weight measurement, male groups showed larger reductions in weight; these reductions were greater at higher dosages. Female groups did not show significant changes. (4) To verify any abnormalities of organs and tissues, we removed the cerebellum, the cerebrum, the liver, the lung, the kidney, and the spinal nerves and conducted histological observations with HE staining. No abnormalities were detected in any of the organs or tissues. (5) One female rat in the 30-mg/kg group had a toe amputated near the administered area, and the histopathological finding was hemorrhage with inflammation, which was presumed to have been caused by a secondary infection after the administration of Sweet BV.

Conclusion: The above findings suggest Sweet BV is a relatively safe treatment medium. Further studies on the subject should be conducted to yield more concrete evidence.

Keywords: Melittin, Sweet Bee Venom, Single dose toxicity

(7) Journal of Korean Pharmacopuncture Institute, Vol 12, No. 4, 51–62, 2009

Effects of Herbal Acupuncture With *Rosae Laevigatae Fructus* Extract at KI10 (Umgok) on Osteoporosis in Ovariectomized Mice

Dong-Soo Kim, Jeoung-Ho Kim, Young-Il Kim

Abstract

Objective: The purpose of this study was to explore the effects of herbal-acupuncture with *Rosae Laevigatae Fructus* extract (RLF-HA) at KI10 (Umgok) on osteoporosis in ovariectomized (OVX) mice.

Method: We carried out several experimental items to analyze the changes in body weight, uterine weight, uterus index, tibial length, ash bone weight, tibial bone mineral density, serum alkaline phosphatase, serum osteocalcin, serum calcium, the levels of calcium and phosphorous, and the calcium/phosphorous ratio in the tibia. We also performed histological and histomorphological analyses.

Results: (1) Herbal acupuncture with *Rosae Laevigatae Fructus* at KI10 (Umgok) and saline injection at KI10 significantly inhibited the reduction of the tibial calcium level in ovariectomized mice. (2) Herbal acupuncture with *Rosae Laevigatae Fructus* at KI10 significantly inhibited the increase of tibial osteoclast cells in ovariectomized mice. (3) Herbal acupuncture with RLF at KI10 significantly inhibited the reduction of tibial trabecular bone thickness in ovariectomized mice. (4) Herbal acupuncture with RLF at KI10 significantly inhibited the overgrowth of the tibial growth plate length in ovariectomized mice.

Conclusions: Our results suggest that herbal acupuncture with RLF at KI10 has a therapeutic effect on osteoporosis and should be put to practical use in the future at osteoporosis clinics.

Keywords: Osteoporosis, Herbal acupuncture, *Rosae Laevigatae Fructus*, KI10 (Umgok)

(8) Journal of Korean Pharmacopuncture Institute, Vol 12, No. 4, 77–88, 2009

Effect of Acupuncture and Electro-acupuncture at ST41 on Intestinal Hypomotility Induced With Loperamide in Rats

Sang-Mi Lee, Hyun Lee

Abstract

Objectives: The purpose of this study was to compare the effect of acupuncture and electro-acupuncture (EA) of low (L) and high (H) frequency at Haegye (ST41) on intestinal hypomotility induced with loperamide in rats.

Methods: We induced a suppressed state of intestinal motility by using loperamide in rats and carried out needle retention acupuncture, low-frequency electro-acupuncture, and high-frequency electro-acupuncture at ST41 in rats divided into a pre-treatment group and a post-treatment group. We fed charcoal to them after the treatment and measured the travel rate of charcoal in the gastrointestinal track to analyze which treatment is more effective in state of intestinal hypomotility.

Results: None of the acuapunctures, EA(L) or EA(H), at ST41 had a significant effect on the intestinal motility of rats in the normal state. Needle retention at ST41 did not significantly increase the intestinal motility that had been suppressed with loperamide in rats. Pre-treatment of EA(L) and EA(H) at ST41 significantly increased the intestinal motility that had been suppressed by loperamide in rats. Post-treatment of EA(L) and EA(H) at ST41 had no significant effect on the intestinal motility of rats in the normal state.

Conclusion: These results suggest that treatment of EA(L) and EA(H) at ST41 may be effective for gastric disorders such as intestinal hypomotility and that its effect has more to do with prevention than cure. Further study is necessary to better understand the effects of electro-acupuncture of low and high frequency at ST41.

Keywords: Needle retention, Acupuncture, Electro-acupuncture, ST41, Loperamide

(9) Journal of Korean Pharmacopuncture Institute, Vol 12, No. 4, 97–110, 2009

Effect of Hominis Placenta Pharmacopuncture on Leg Spasticity in Stroke Patients—A Pilot Double-blind Randomized Controlled Clinical Trial

Ju-Hwan Noh, Jung-Ah Park, Hyoun-Min Youn, Kyung-Jeon Jang, Choon-Ho Song, Chang-Beohm Ahn, Cheol-Hong Kim

Abstract

Objectives: The purpose of this study is to determine the effect of hominis placenta pharmacopuncture (HPP) on lower limb spasticity control in stroke patients.

Methods: Twenty stroke patients with leg spasticity were randomly divided into two groups, a distilled water pharmacopuncture (group I) and a HPP (group II). Pharmacopuncture was administered five times a week, and acupuncture treatment 3 times a week for 3 weeks. The modified Ashworth scale (MAS), the H-reflex/M-response ratio (H/M ratio), the Berg Balance Scale (BBS) and the Time Up and Go (TUG) were used to evaluate spasticity control before the experiment and after at 1, 2 and 3 weeks.

Results: Group I showed significant improvement ($p < 0.05$) in BBS, but no significant improvement in MAS, H/M ratio, and TUG. Group II showed significant improvement ($p < 0.05$) in MAS, BBS and TUG, but no significant improvement in H/M ratio. The results showed a significant difference in TUG, but no significant differences in MAS, H/M ratio and BBS between the two groups.

Conclusion: These results showed that HPP might decrease lower limb spasticity and increase leg motor function in stroke patients. Further studies will be required to examine more cases over a longer period to completely understand the effect of HPP on lower limb spasticity.

Keywords: Spasticity, Stroke, Hominis placenta pharmacopuncture, H-reflex/M-response ratio

(10) Journal of Korean Pharmacopuncture Institute, Vol 12, No. 4, 111–118, 2009

Effect of Acupuncture Therapy in Combination With Soyeom Pharmacopuncture Therapy on Relieving the Symptoms of Patients With a Herniated Intervertebral Disk of the L-spine During the Initial Stage of Hospitalization

Hyong-gun Song, Joo-young Choi, Jae-hui Kang, Hyun Lee

Abstract

Objectives: A herniated intervertebral disk (HIVD) of the L-spine is one of the most common diseases that causes back pain and radiating pain. The aim of this study was to find out if acupuncture therapy combined with soyeom pharmacopuncture therapy could relieve the symptoms of patients suffering from the disease more effectively than treatment with acupuncture therapy only

Methods: Thirty patients were divided into two groups. Group A was treated with the acupuncture therapy only, and Group B was treated with soyeom pharmacopuncture therapy in addition to acupuncture therapy. We observed the patients for 7 days. Visual analog scale (VAS) for pain was measured four times and straight leg raising test (SLRT) was measured twice.

Results: (1) For the first 7 days after admission, the VAS score decreased significantly in both Group A and Group B. (2) For the first 7 days after admission, the VAS score of Group B was significantly lower than that of Group A; thus, the patients in Group B improved more rapidly than the patients in Group A. (3) From the admission day to the third hospital day, the improvement index of the VAS score of Group B was significantly higher than that of Group A, but after the fifth hospital day, there was no significant difference between the improvement index of the VAS score of Group A and that of Group B. (4) For first 7 days of admission, the degree of SLRT improved significantly in both Group A and B, but there was no significant difference between the two groups.

Conclusion: We can use soyeom pharmacopuncture therapy with acupuncture therapy to help patients suffering from back pain and radiating pain improve more rapidly.

Keywords: Herniated intervertebral disk (HIVD), Soyeom pharmacopuncture, Acupuncture, Visual analog scale, Straight leg raising test

(11) Journal of Korean Pharmacopuncture Institute, Vol 12, No. 4, 119–126, 2009

Acupotomy and Venesection in Upper Limb Lymphedema and Peripheral Neuropathy Following Breast Cancer Surgery

Eun-Ha Jang, So-Yeon Kim, Hyun-Sik Kim, Sung-Chul Kim

Abstract

Objectives: This study was conducted to estimate the clinical effects of acupotomy and venesection in a patient with peripheral neuropathy and upper limb lymphedema following breast cancer surgery.

Methods: From August 17 to August 29, 2009, one female patient with peripheral neuropathy and upper limb lymphedema following breast cancer surgery was treated with general oriental medicine therapy (acupuncture, moxibustion, cupping, physical therapy, and herbal medication) and acupotomy with venesection.

Results: The patient's chief complaints, including left hand numbness, left arm edema and left wrist flexion limitation, were notably improved.

Conclusions: This study demonstrated that oriental medical treatment with acupotomy and venesection therapy can have a significant effect in relieving the symptoms of peripheral neuropathy and upper limb lymphedema following breast cancer surgery. Because of our limited experience with this treatment, more research is needed.

Keywords: Acupotomy, Venesection, Peripheral neuropathy, Breast cancer, Postmastectomy lymphedema
